

REMARKS

Paragraph numbers utilized herein correspond to like paragraph numbers in the Office action.

Telephonic Interview

The applicant wishes to thank Examiner Rajguru for the courtesies extended to applicant's attorney, Mark Gilbreth, on May 17, 2000, and for kindly faxing a copy of the missing U.S. Pat. No. 2,119,829 (Parsons). As indicated by applicant, there is no need to reissue the Office action.

Evolution of the Art

Prior to addressing the substantive rejections, applicant wishes to summarize the evolution of the art, and briefly note the importance of applicant's invention:

- (1) Early art taught sequential injection of a solution of the polymeric gel components;
- (2) with an improvement being formation of a single aqueous gelation solution at the surface;
- (3) with a further improvement being surface formation of a gelation solution to which the fibers are then added; and
- (4) as applicant's further evolution, the claimed invention is directed to a dry mix of the polymeric gel components and fibers.

Notice that (1), (2) and (3) all involve solutions rather than applicant's dry mix

Rejection Under 35 USC 112

2. Claims 1, 4, 6, 8, 9, 11 and 12 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection is respectfully traversed.

The Office action notes these claims are indefinite in reciting an improper Markush terminology and kindly suggests as proper wording, "selected from the group consisting of".

As the claims have been amended, as kindly suggested by the Examiner, they are believed to overcome the rejection.

1st Rejection Under 35 USC 103

4. Claims 1-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merrill (USP 5377760) in view of Messenger (USP 4579668) or Parsons (USP 2119829) further in view of Clampitt et al. (USP 3845822). The rejection is respectfully traversed.

In response, it is respectfully noted by applicant that Claims 1-13 are patentable over Merrill in view of Messenger or Parsons or further in view of Clampitt et al. at least by the required "dry mixture" of "polymeric crosslinking agent and a reinforcing material."

It is further respectfully noted by applicant that all of Merrill, Messenger, Parsons, and Clampitt teach addition of reinforcing material to well fluids.

Merrill

Merrill teaches the formation of a gelation solution to which the fibers are then added (i.e. fibers are added to "wet" polymer):

See, abstract, "fibers are added to a gelation solution;"

See, col. 2, at 42-43, "introducing reinforcing fibers into the gelation solution;"

See, col. 2, at 52-53, "quantity of fibers introduced to the gelation solution:"

See, col. 3, at 10-12, "the invention contemplates the incorporation of fibers in a gel by mixing the fibers with the gelation solution at the surface;"

See, col. 7, at 7-9, "results further confirm the increased strength produced by adding reinforcing fibers to the gelation solution prior to injection;"

See, col. 7, at 15-18, "mixing the fibers with the gelation solution and injection the resulting mixture;"

See, col. 7, lines 4-48, "fibers are simple to introduce into the gelation solution;" and

See, claim 1, which requires first "providing a gelation solution" and then "introducing reinforcing fibers . . . into the gelation solution."

Messenger

It is respectfully noted by applicant that Messenger teaches that "the loss circulation agents...may be added to the drilling mud as it is circulated through the well in the course of normal drilling operations, or they may be added in a discreet slug which is spotted at the loss circulation zone" (emphasis added) (col. 4, lines 45-52).

Parsons

It is also respectfully noted by applicant that Parsons also teaches "the addition of certain materials in a particular form to the circulating fluid (emphasis added) (page 2, col. 2, lines 19-21).

Clampitt

The Office notes that Clampitt teaches the preparation of "a dry mixture of the cellulose ether, the metal-containing compound and the reducing agent, in proper proportions, and then add this dry mixture to the proper amount of water." (col. 8, lines 21-25).

However, the applicant respectfully notes that Clampitt teaches away from the addition of finely divided solid material to such a dry mixture. Clampitt teaches the addition of finely

divided solid material "into the polymer solution prior to the addition of the reducing agent and oxidizing agent" (col. 13, lines 51-53).

Clampitt teaches, as an alternative, "the finely divided material can be added...as the base solution containing the cellulose ether and other components are being pumped through said conduit. It will usually be preferred to add the finely divided solid material last (col. 13, lines 56-61).

Rejection Under 35 USC 102

6. Claims 1-4, 7 & 11 stand rejected under 35 U.S.C. 102(b) as being anticipated by Merrill (USP 5377760). The rejection is respectfully traversed.

In response, claims 1-4, 7 & 11 all distinguish Merrill at least by the required dry mixture. In contrast, Merrill teaches the formation of a gelation solution (i.e., not a dry mixture) to which fibers are added:

See, abstract, "fibers are added to a gelation solution;"

See, col. 2, at 42-43, "introducing reinforcing fibers into the gelation solution;"

See, col. 2, at 52-53, "quantity of fibers introduced to the gelation solution;"

See, col. 3, at 10-12, "the invention contemplates the incorporation of fibers in a gel by mixing the fibers with the gelation solution at the surface;"

See, col. 7, at 7-9, "results further confirm the increased strength produced by adding reinforcing fibers to the gelation solution prior to injection;"

See, col. 7, at 15-18, "mixing the fibers with the gelation solution and injection the resulting mixture;"

See, col. 7, lines 4-48, "fibers are simple to introduce into the gelation solution;" and


See, claim 1, which requires first "providing a gelation solution" and then "introducing reinforcing fibers . . . into the gelation solution."

In view of the above arguments, prompt allowance of all pending claims is respectfully requested.

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicants' attorney Mark Gilbreth at 713/227-1200, or in his absence Dr. Mary Gilbreth, Agent.

Respectfully submitted,

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